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PATENT APPLICATION
IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicants: Akira EBIHARA et al
For: POLISHING TAPE USED IN PRODUCTION
OF MAGNETIC RECORDING MEDIUM
Serial No.: 09/806 082 Group: 1771
Confirmation No.: 4908
Filed: August 20, 2001 Examiner: Juska
International Application No.: PCT/JP99/05434
International Filing Date: September 30, 1999
Atty. Docket No.: Kanebo Case 5

Commissioner for Patents
P.O. Box 1450
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DECLARATION UNDER 37 CFR 1.132

I, the undersigned, hereby declare:

I am one of the inventors of the invention described and claimed in application Serial No. 09/806 082, filed on August 20, 2001.

I hereby incorporate herein, by reference thereto, the contents of the Examples and Comparative Examples contained on pages 19-24 of the above-identified application.

I have carried out additional tests to illustrate the criticality of the claimed parameters of the polishing tape of the present invention.

Polishing tapes were prepared according to the procedures set forth in application Serial No. 09/806 082. The comparative polishing tapes prepared in the comparative examples shown below were prepared by the same method as the inventive polishing tapes in the examples shown below except that the comparative polishing tapes had a parameter that was outside the scope of the present invention. The results are in the tables blow.

		TABLE 1					
		Example 1	Comparative Example 1	Example 2	Example 3	Example 4	Comparative Example 2
Constituent features	File fiber diameter (μm)	6.0	7.0	4.3	4.3	4.3	4.3
	File fiber fineness (d)	0.29	0.39	0.15	0.15	0.15	0.15
	File material	Nylon 6	Nylon 6	Nylon 6	Nylon 6	Nylon 6	Nylon 6
	File height (mm)	0.5	0.5	0.2	0.5	1.0	0.1
	Flocking density (g/m^2)	150	150	180	180	180	180
	Opening processing step	Continuous	Continuous	Continuous	Continuous	Continuous	Continuous
Results of Use	Surface roughness of substrate after polishing: R_a (\AA)	13.2	13.9	12.7	11.1	13.8	9.5
	Processing speed (mm)	112	95	92	107	116	55
Assessments of the overall trend		Good	Coming across large scratches occasionally	Good	Good	Good	Good

		TABLE 2				
		Comparative Example 3	Example 5	Example 6	Comparative Example 4	Comparative Example 5
Constituent features	Fiber fiber diameter (μm)	4.3	6.0	6.0	6.0	6.0
	Fiber fiber fineness (d)	0.15	0.29	0.29	0.29	0.29
	Fiber material	Nylon 6	Nylon 6	Nylon 6	Nylon 6	Nylon 6
	Fiber height (mm)	1.2	0.5	0.5	0.5	0.5
	Flocking density (g/m ²)	180	100	200	80	220
	Opening processing step	Contin- uous	Contin- uous	Contin- uous	Contin- uous	Contin- uous
Results of use	Surface roughness of substrate after polishing; Ra (Å)	18.0	14.1	11.8	16.9	9.2
	Processing speed (mm)	135	127	92	141	68
Assessments of the overall trend		Coming across large scratches occasionally	Good	Good	Coming across large scratches occasionally	Good

		TABLE 3						
		Example 1	Comparative Example 1	Example 2	Example 3	Example 4	Comparative Example 2	Comparative Example 3
Constituent features	Wett fiber diameter (μm)	5.0	7.0	4.3	4.3	4.3	4.3	4.3
	Wett fiber fineness (d)	0.29	0.39	0.15	0.15	0.15	0.38	0.15
	Wett polymer	Nylon 6	Nylon 6	Nylon 6	Nylon 6	Nylon 6	Nylon 6	Nylon 6
	Cover factor	3.198	2.875	3.341	2.016	4.376	1.845	4.720
Results of use	Surface roughness of substrate after polishing; Ra (Å)	11.2	14.3	9.2	11.1	7.8	15.1	6.8
	Processing speed (mm)	88	114	86	105	75	122	66
Assessments of the overall trend		Good	Coming across large scratches occasionally	Good	Good	Good	Coming across large scratches occasionally	Difficulty of making the tape

DISCUSSION OF RESULTS

As can be seen from Tables 1 and 2 above, the polishing tapes of Comparative Example 1, which had a pile fiber fineness greater than the claimed upper limit of Claim 1, Comparative Example 2, which had a pile height less than the claimed lower limit of Claim 1, Comparative Example 3, which had a pile height greater than the claimed upper limit of Claim 1, Comparative Example 4, which had a pile density less than the claimed lower limit of Claim 1, and Comparative Example 5, which had a pile density greater than the claimed upper limit of Claim 1, were all inferior to the polishing tapes of Examples 1-6, which correspond to currently presented Claim 1.

Table 3 compares polishing tapes according to Claim 2 in Examples 1-4 with comparative polishing tapes of Comparative Example 1, which had a weft fiber fineness greater than the upper limit of Claim 2, Comparative Example 2, which had a cover factor less than the lower limit of Claim 2, and Comparative Example 3, which had a cover factor greater than the upper limit of Claim 2. As can be seen by the results in Table 3, the polishing tapes corresponding to Claim 2, clearly were superior to the comparative polishing tapes.

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Dated: Oct. 23. 2003

